



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,998	03/23/2006	Martin Lang	VO-749	9030
43419 7590 06/22/2009 PAULEY PETERSEN & ERICKSON 2800 WEST HIGGINS ROAD SUITE 365 HOFFMAN ESTATES, IL 60169				
EXAMINER				
HUNTER, QUINN T				
ART UNIT		PAPER NUMBER		
2835				
MAIL DATE		DELIVERY MODE		
06/22/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/572,998

Applicant(s)

LANG ET AL.

Examiner

QUINN HUNTER

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 17-22 and 26 is/are rejected.
- 7) ☒ Claim(s) 12-16 and 23-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Reply Under 37 CFR 1.111

1. The Applicant's reply filed on 03/02/2009 has been received and its contents have been considered. Claims 1-9, 11-20, and 22-27 are pending in the instant application. The office action is as follows:

Drawings

2. Formal drawings for this application have yet to be filed at the time of this office action. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Examination of this application in this and the previous office actions have been with the filed priority documents as a best understanding of the application.

Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2835

4. Claims 1-4, 17, 19, 20, 22, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (Japanese Patent 08046381 1) (from IDS) in view of Chang (US 7,028,389 B2).

In re claim 1, Shimada discloses:

- a mounting plate (10) for electronic components (GTR), having cooling conduits (12, 14, 16, 18) integrated in a plate body for a cooling medium to flow through
- at least one holding element with a fastening screw thread (N4, M4, Drawing 2) and at least one first groove (GP) or rib, to be undercut, extending in a straight line in an extension direction of the mounting plate (10), and into which the at least one holding element is insertable for fixing the component (GTR) in place
- wherein at least one holding element is embodied as a groove insert which has a base part (see Fig 2 Shimada enclosed) insertable into the first groove, a top part (see Fig 2 Shimada enclosed) protruding from the first groove, and a fastening section (see Fig 2 Shimada enclosed) protruding transversely from the top part and spaced apart from a mounting level of the mounting plate

Shimada lacks:

- wherein the fastening section includes at least one threaded bore into which an attachment screw can be rotated for fixing the component in place (in Shimada, the roles of the bore and screw are reversed in the fastening section).

Chang teaches that a fastening section for a holding element (12, Fig 5) may have a threaded bore (13, Fig 5) and attachment screw (7, Fig 5). It would have been obvious to one skilled in the electronics fastener art to form a fastening section with a threaded bore and attachment screw, as taught by Chang, to allow fastening with a screwdriver tool, since all of the claimed elements were known at the time of the invention and could have been combined using known methods in the electronics fastener art to achieve a predictable result of a fastener usable with a common screwdriver. *KSR International Co. v. Teleflex Inc.* (KSR), 550 U.S. ___, 82 USPQ2d 1385 (2007)

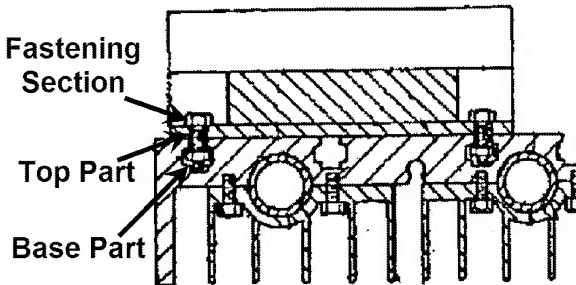


Fig 2 Shimada Enclosed

In re claim 2, Shimada discloses wherein the fastening arrangement has at least one second groove (GP) or rib, similar to the first groove or rib and extending parallel with respect to the first groove or rib, with a distance from the

Art Unit: 2835

first groove or rib substantially determined by the a length of extension of the electronic component (GTR) to be mounted, which runs perpendicularly with respect to the first or second groove (GP) or rib.

In re claim 3, Shimada discloses wherein the fastening arrangement has at least one further groove (GP) or rib extending parallel with the second groove or rib, similar to the first groove or rib and the second groove or rib, which extends along the side of the second groove or rib facing away from the electronic component to be mounted at a distance which is less than the distance between the first groove or rib and the second groove or rib.

In re claims 4 and 17, Shimada discloses wherein electronic components (GTR), which have screw holes (N1, N2, N3, N4), can be fastened by screws directly on the holding elements (N4, M4) inserted into the grooves (GP) or ribs, or can be fixed in place by strip-like holding elements, which are attached one of indirectly and directly to the holding elements.

In re claim 19, Shimada discloses, wherein the holding (Drawing 2, Shimada) element is a spring nut.

In re claim 20, Shimada discloses wherein at least one of the first groove (GP Shimada), the second groove and the next further groove are embodied in one piece with the plate body.

In re claim 22, Shimada discloses wherein at least one holding element is a sliding block with a base part (M4, Shimada) which can be pushed into one of the grooves, and a top part (N4, Shimada) protruding from the groove, and a threaded bore is arranged in the top part (N4, Shimada) in a normal direction with

Art Unit: 2835

respect to the mounting level, on which a holding for the component can be screwed in place.

In re claim 26, Shimada discloses:

- a mounting plate (10) for electronic components (GTR), having cooling conduits (12, 14, 16, 18) integrated in a plate body for a cooling medium to flow through
- at least one holding element with a fastening screw thread (N4, M4, Drawing 2) and at least one first groove (GP) or rib, to be undercut, extending in a straight line in an extension direction of the mounting plate (10), and into which the at least one holding element is insertable for fixing the component (GTR) in place
- wherein at least one holding element is embodied as a groove insert which has a base part (see Fig 2 Shimada enclosed) insertable into the first groove, a top part (see Fig 2 Shimada enclosed) protruding from the first groove, and a fastening section (see Fig 2 Shimada enclosed) protruding transversely from the top part and spaced apart from a mounting level of the mounting plate
- wherein when inserted, the groove insert can be positioned over a portion of the component to be secured, the fastening section being spaced apart from the mounting level a distance greater than a thickness of the portion of the component in a direction perpendicular to the mounting level (under N4, Fig 2)

Shimada lacks:

Art Unit: 2835

- wherein the fastening section includes at least one threaded bore into which an attachment screw can be rotated for fixing the component in place (in Shimada, the roles of the bore and screw are reversed in the fastening section).

Chang teaches that a fastening section for a holding element (12, Fig 5) may have a threaded bore (13, Fig 5) and attachment screw (7, Fig 5). It would have been obvious to one skilled in the electronics fastener art to form a fastening section with a threaded bore and attachment screw, as taught by Chang, to allow fastening with a screwdriver tool, since all of the claimed elements were known at the time of the invention and could have been combined using known methods in the electronics fastener art to achieve a predictable result of a fastener usable with a common screwdriver. *KSR International Co. v. Teleflex Inc.* (KSR), 550 U.S. ___, 82 USPQ2d 1385 (2007)

Regarding the spacing of the fastening section, given that a piece of the fastening section must be present above a component thickness, it can be said to extend a distance greater than a thickness of the component.

5. Claims 5-9, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada (Japanese Patent 08046381 1) (from IDS) in view of Chang (US 7,028,389 B2) as applied to claim 4 above, and further in view of Dessert (US 3,398,249).

In re claims 5 and 18, Shimada in view of Chang discloses the claimed invention except wherein the fastening arrangement comprises at least one

Art Unit: 2835

angled sheet metal piece, and electronic components having holes with a spacing between each other that is one of less than the distance between the second groove and the first groove, and less than the distance of the still next further groove from the first groove, can be clampingly fixed in place at least on one side by an angled sheet metal piece with at least one screw engaging at the holding element inserted into the corresponding groove.

E. P. Dessert teaches that an electrical component (58, Fig 5) may be kept to a plate (P', fig 5) with an angled sheet metal piece (14, Fig 5) and screw. It would have been obvious to one skilled in the electronics mounting art to have modified an electrical component to be fastened by an angled sheet metal piece, as taught by E. P. Dessert, to more securely fasten an electronic piece to a plate, since all of the claimed elements were known at the time of the invention and could have been combined using known methods in the electronics mounting art to achieve a predictable result of an electrical component bound to a plate by sheet metal piece in addition to a screw. *KSR International Co. v. Teleflex Inc.* (KSR), 550 U.S. ___, 82 USPQ2d 1385 (2007)

In re claim 6, Shimada in view of Chang and Dessert discloses, wherein the angled sheet metal piece (14, Fig 5 Dessert) has a flat base plate (46a, Fig 8 Dessert) for placement against the mounting plate and a clamping area (50a, b, Fig 8), which is angled with respect to it, for the clamping fixation of the electronic component to be mounted.

In re claim 7, Shimada in view of Chang and Dessert discloses wherein the angled sheet metal piece (14, Fig 5 Dessert) has at least one elongated hole

Art Unit: 2835

(52, Fig 5 Dessert) which extends perpendicularly with respect to the direction of extension of the second groove or the still further groove, for receiving the screw.

In re claim 8, Shimada in view of Chang and Dessert discloses, wherein the holding (Drawing 2, Shimada) element is a spring nut.

In re claim 9, Shimada in view of Chang and Dessert discloses wherein at least one of the first groove (GP Shimada), the second groove and the next further groove are embodied in one piece with the plate body.

In re claim 11, Shimada in view of Chang and Dessert discloses wherein at least one holding element is a sliding block with a base part (M4, Shimada) which can be pushed into one of the grooves, and a top part (N4, Shimada) protruding from the groove, and a threaded bore is arranged in the top part (N4, Shimada) in a normal direction with respect to the mounting level, on which a holding for the component can be screwed in place.

Allowable Subject Matter

6. Claims 12-16, 23, 24, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable (subject to correction of the objections as stated above) if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12, 23, and 27 claim a "holding strip which can be arranged transversely with respect to the grooves and is dimensioned to span the distance between the two grooves and can be fixed in place by threaded bores in the end sections on both sides in at least one of the sliding blocks and groove inserts

Art Unit: 2835

pushed into the respective grooves." Holding strips that span the distance between two grooves were known in the Shimada reference (see 112, Drawing 1). These however do not fix into the holding element sliding blocks or the holding element groove inserts of Shimada. This claim element is neither found in the prior art of record and therefore makes claims 12, 23, and 27 allowable over the prior art of record.

Claims 13-16 are dependent on allowable claim 12 and are therefore allowable over the prior art of record.

Claims 24 and 25, are dependent on allowable claim 23, and are therefore allowable over the prior art of record.

Response to Arguments

7. Regarding applicant remarks to the spacing of the fastening section in the Shimada reference, given that a piece of the fastening section must be present above a component thickness, it can be said to extend a distance greater than a thickness of the component.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUINN HUNTER whose telephone number is (571)270-3910. The examiner can normally be reached on Mon.-Fri., 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2835

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Quinn Hunter
Examiner
Art Unit 2835

/Jayprakash N Gandhi/
Supervisory Patent Examiner, Art Unit 2835